



FEMA

POSITION TASK BOOK FOR THE POSITION OF

**National Qualification System
GEOGRAPHIC INFORMATION SYSTEMS
ANALYST (TYPE 1)**

GEOGRAPHIC INFORMATION SYSTEMS ANALYST (TYPE 1)

1. Competency: Assume position responsibilities

Description: Successfully assume the role of Geographic Information Systems (GIS) Analyst and initiate position activities at the appropriate time according to the following behaviors.

1a. Behavior: Gather, update, and apply situational information relevant to the assignment

TASK	CODE	EVALUATION RECORD #	EVALUATOR INITIALS AND DATE
1. Gather logistical information: <ul style="list-style-type: none"> ● Incident base facilities ● Equipment and supplies available (plotter, computers, ink, paper) ● Availability of GIS server and software licenses 	E, F, I		

2. Competency: Communicate effectively

Description: Use suitable communication techniques to share relevant information with appropriate personnel on a timely basis to accomplish objectives in a potentially rapidly changing environment.

2a. Behavior: Produce and distribute information per established guidelines and ensure recipient understands information

TASK	CODE	EVALUATION RECORD #	EVALUATOR INITIALS AND DATE
2. Assist in the production of incident products by completing digital analysis.	E, F, I		
3. Collate data from initial and ongoing assessment of incident-related damage and needs, conduct impact analyses, and inform planning and resource decisions with assessment results.	E, F, I		
4. Define, implement, and maintain a daily archival process: <ul style="list-style-type: none"> ● Perform daily backups ● Upload data and GIS products to relevant file transfer protocol (FTP) sites ● Create backup copies of incident spatial data within the incident data structure 	E, F, I		
5. Develop and update products within established time frames.	E, F, I		
6. Develop key GIS products in at least four of these functional areas: <ul style="list-style-type: none"> ● Emergency Services ● External Affairs ● Hazard Mitigation ● Individual Assistance ● Logistics ● Long-Term Recovery and Planning ● Planning ● Public Assistance/Infrastructure 	E, F, I		
7. Develop, update, and maintain metadata.	E, F, I		
8. Generate and integrate event-specific model output in coordination with authoritative sources.	E, F, I		
9. Identify and obtain data from internal and external stakeholders to develop and update GIS products: <ul style="list-style-type: none"> ● Incident maps ● Reference maps: political jurisdiction maps and demographics ● Quantitative and qualitative thematic maps ● Interactive map products: Keyhole Markup Language (KML), ArcReader, web mapping software 	E, F, I		
10. Meet information requirements to support decisions.	E, F, I		
11. Provide the Documentation Unit or other appropriate personnel with written documentation, digital data, and products developed during the incident, as requested.	E, F, I		
12. Use standard data file structure.	E, F, I		

3. Competency: Ensure completion of assigned actions to meet identified objectives

Description: Identify, analyze, and apply relevant situational information and evaluate actions to complete assignments safely and meet identified objectives. Complete actions within established time frame.

3a. Behavior: Maintain GIS products and hardware software applications

TASK	CODE	EVALUATION RECORD #	EVALUATOR INITIALS AND DATE
13. Create, maintain, and update GIS databases.	E, F, I		
14. Ensure that data is accurate and from authoritative sources.	E, F, I		
15. Import/export GIS data: <ul style="list-style-type: none"> • Various coordinate systems, Geographic to United States National Grid (USNG) • Data • Projections 	E, F, I		
16. Operate and maintain desktop and wide-format printers.	E, F, I		
17. Operate specialized applications or GIS software for disaster support: <ul style="list-style-type: none"> • Adobe products • ArcGIS Desktop • ArcGIS Spatial Analyst • Google Earth • Microsoft Office Suite • Information Management Systems 	E, F, I		

3b. Behavior: Gather, analyze, and validate information pertinent to the incident or event and make recommendations for setting priorities

TASK	CODE	EVALUATION RECORD #	EVALUATOR INITIALS AND DATE
18. Download data from various GPS units and incorporate the data into the incident GIS.	E, F, I		
19. Identify, obtain, and catalog data (digital and paper): <ul style="list-style-type: none"> • Base • Incident • Local • Metadata 	E, F, I		
20. Review maps and data for accuracy and report inaccuracies to Situation Unit Leader.	E, F, I		
21. Support incident modeling and mapping requests.	E, F, I		

3c. Behavior: Utilize information to produce outputs

TASK	CODE	EVALUATION RECORD #	EVALUATOR INITIALS AND DATE
22. Assist in digitizing and georeferencing data within GIS software: <ul style="list-style-type: none"> • Vector • Raster 	E, F, I		

23. Coordinate with GIS Supervisor, Situation Unit Leader, Situational Awareness Unit Leader, or appropriate personnel to prepare incident maps and displays by collecting and interpreting information: <ul style="list-style-type: none"> ● Photos ● Graphics/images ● Other documents ● Operations and planning personnel 	E, F, I		
24. Help produce and update digital maps within established guidelines and time frames using ICS symbols: <ul style="list-style-type: none"> ● Incident Action Plan (IAP) map ● Incident briefing map ● Situation/planning map ● Transportation map ● Fire progression map 	E, F, I		
25. Perform advanced geoprocessing and analytical tasks: <ul style="list-style-type: none"> ● Surface and spatial analysis ● Advanced SQL queries ● Network analysis and optimization ● ModelBuilder, heat maps, and data interpolation 	E, F, I		